DOCUMENT RESUME

ED 075 907 EA 004 931

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TITLE	Conceptual Models for Research and Practice in the Administration of Change.
PUB DATE	Feb 73
NOTE	27p.; Paper presented at American Educational Research Association Annual Meeting (58th, New Orleans, Louisiana, February 25-March 1, 1973)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Administrative Principles; Adoption (Ideas); Change Agents; Diffusion; *Educational Administration; *Educational Development; Information Utilization; Intervention; *Models; *Organization; *Organizational Change; Power Structure; Problem Solving; Research and Development Centers; Social Relations; Speeches; Systems Approach
IDENTIFIERS	*Change Strategies

ABSTRACT

Contemporary approaches to research and practice in the administration of organizational change tend to emphasize systematic aspects of the process, focusing on the orderly sequencing of such activities as goal-setting, planning, and execution. This emphasis has given rise to efforts to identify and describe overall strategies of organizational change and to explicate the activities that "go with" each of the various strategies as tactics. These strategies and tactics provide useful conceptual models for both the practice of administration and the conduct of research in organizational change. A number of identifiable strategies and tactics of organizational change, drawing upon various orientations to the task, are described, and their implications for both administrative practice and research are discussed. (Author)

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CONCEPTUAL MODELS FOR RESEARCH AND PRACTICE IN THE ADMINISTRATION OF CHANGE

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Prepared for
1973 Annual Meeting
American Educational Research Association
February 25-March 1, 1973
New Orleans, Louisiana

EA 004 931

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In the folk-wisdom of management and administration there are two principal orientations for improving the performance of the organization in achieving its goals: improving knowledge utilization, as typified by the R & D approach, and coercion, commonly expressed through the manipulation of sanctions by the administrative hierarchy. In the administration of public schools, the R & D approach has traditionally been a popular organizational fiction which imparted some patina to claims of scientific rationality while coercion was often carefully dressed in the trappings of "democratic administration." Since the 1950's, efforts to expand the role of behavioral science concepts and methodology in the practice and teaching of educational administration have added considerable range and variety to the repertoire of strategies and tactics of organizational change available to the practicing school administrator.

This growth has not been the result of any single dramatic breakthrough in either the behavioral sciences or in the still-immature discipline of educational administration. Though we have come a long way in developing our understanding of organizational change, the state of the art is still such that we are developing rather elementary ways of thinking and inquiring. The recognition of this basic fact is, in itself, an important contribution of the behavioral and social sciences to the development of educational administration theory for, as Martin Trow has pointed out, "...it is that the development of theory of various kinds is not simply the product of acts of will, but is the slow outcome of many efforts to describe, explain and account for specific social phenomena." [1]

There is a substantial body of literature comprised of attempts to describe, explain and account for organizational change. Other papers in this symposium will add to that literature. Because taxanomic inquiry has been central to the development of a number of sciences, some of the most promising descriptive and explanatory efforts in the field of organizational change - both for investigators and for practitioners - are those which attempt to identify, describe, and classify the various genre of orientations to organizational change. For those whose interest is not merely in the study and description of change processes but who seek to develop interventions designed to direct and control organizational change - either applied behavioral scientists or administrative practitioners - such inquiry can suggest theory-based coherent strategies of change to replace the ad hoc traditions which have so often failed to meet the demands placed on them.

The R & D Tradition

The R & D concept of a rational approach to change has, of course, great appeal to the scientific community. Its popularization through the extensive writings of American sociologists - especially rural sociologists - who described the impact of this concept on agricultural and rural communities has done much to entrench this approach to change in the minds of many Americans as the approach. As Chin has pointed out, the logic and rationality of R & D has great appeal to those who are well-educated in the Western tradition.[2]

Paul Mort was, of course, instrumental in popularizing R & D concepts of change among educational administrators. Not content to study and speculate, Mort went far in developing a structure in education which he felt would facilitate the diffusion of scientific knowledge through the education community and speed up the processes of adopting the new processes and

techniques which the knowledge suggested. The Associated Public School Systems, the Metropolitan School Study Council, and the Central Schools Study were visible elements in Mort's conception of an educational R & D network on the pattern of the land grant university-agricultural extension center-county agent linkage system which has popularly become known as the "agricultural model." The impact of this phase of Mort's work may be seen not only in the durability of the network he created to interconnect educational research, product development, and a diffusion network - the Indicators of Quality project perhaps being the most visible project of that network at the present time - but also in the number of school study councils that were spun off across the country and still are very much in business.

Brickell strengthened the R & D tradition in education beginning with his 1961 study in New York State when he chose to use the discovery-diffusion-adoption sequence as an important element in his research design.[3] But among his observations, three have had especially lasting impact upon educational administrators concerned with the resistance, lethargy, and blocks to constructive change so readily visible in the schools:

1. Though there were many changes to be found in the schools, they were typically limited to things like new courses, different scheduling techniques, or limited team teaching arrangements. The point is that schools were rarely changed substantially <u>as organizations</u>,
2. Many new ideas were being taken off of the drawing board and installed in schools with little or no evaluation under conditions comparable to the public school environment, and
3. The introduction of change depended largely upon administrators who have great power and influence to either block a new idea or get it installed. He found such concepts as "shared decision making"

and "full staff involvement" to be largely euphemisms to camouflage the administrator's power to get the faculty to do as he wished.

Brickell proposed a neat three-element structure for New York State which was intended for formalize and expedite the discovery-diffusion-adoption process in the public schools by (1) fixing responsibility for each phase of the process in a specialized agency, (2) separating each phase of the process from the others so that each phase could be undertaken by expert specialists, and (3) providing state financing for the development of a proposed change up to the point where it is ready for adoption by local school districts. Brickell understood - as few public school administrators of his time did - that the goal of R & D is the production of high performance educational products and that this required highly coordinated teamwork by specialized agencies in the various phases of the process.

The achievements of the post-Sputnik "new curricula"* were widely recognized as brilliant applications of the R & D change strategy to public school education. Each of these projects, utilizing concepts which underlie the strategy (e.g., the development of fool-proof high performance products, each phase of the process being carried out by specialists), made impressive changes in its selected curriculum target area at relatively low cost in a remarkably telescoped time-frame.

It seems obvious that extensive scientific study of the phenomena of knowledge utilization in social systems, well-represented by the work of Everett Rogers[4] and Havelock[5], have had practical effect in the political and academic realms. The Congressional action of 1964 and 1965, setting in motion

*Such as the Physical Sciences Study Committee (PSSC), the Biological Sciences Curriculum (BSCS), the Chemical Bond Approach Project (Chem Bond or CBA) and the School Mathematics Study Group (SMSG).

the establishment of educational research and development centers and the regional educational laboratories, was a relatively giant step in the direction of providing something akin to an adequate educational research and development capability in this country. In business for less than a decade, the 10 R & D centers and 11 regional laboratories have developed, tested, and made available an impressive array of high-performance educational products. The thrust of much of their output has been in classroom teaching materials and especially "packages" suitable for individualizing instruction.* One center - the Center for the Advanced Study of Educational Administration - has placed its emphasis on research and the development of techniques in the area of facilitating change processes in schools as organizations.

In a sense the National Institute of Education, finally wobbling toward a take-off in more-or-less the direction of basic research (in the pattern of the National Institute of Health)rather than in a project-oriented pattern (following the NASA format), there are high hopes that NIE will be instrumental in educational R & D. Many anticipate that its role will be to stimulate seminal research into fundamental educational questions and problems, leaving to other agencies the tasks of developing applications to school practice and disseminating the knowledge discoveries to potential adoptors.

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*Such as the Individually Guided Education (IGE) program produced by the Wisconsin Research and Development Center for Cognitive Learning, the Individually Prescribed Instruction (IPI) mathematics curriculum of Philadelphia's Research for Better Schools, Inc., and the Individualized Mathematics System (IMS) produced by the Center for Individualized Instructional Systems.

The Tradition of Coercion in Educational Change

Etzioni's analysis of organizational compliance structures is useful in viewing coercion as an organizational change orientation in schools. One of the organizational characteristics of schools which places them in a somewhat unique position among organizations is that, while they primarily utilize normative means for influencing the organizational behavior of their participants, there is a strong secondary coercive pattern which varies considerably in intensity from school to school. Thus, schools tend to emphasize the manipulation of such normative variables as prestige symbols (e.g., marks, honor roll, National Honors Society, leaders clubs), student judgment of their peers (e.g., elections, club membership, student government), personal influence of teachers and administrators (e.g., informal counselling, rap sessions), and the general climate of group opinion and organizational culture in the school. While the use of coercive power to control the organizational behavior of participants has declined in popularity over the years, it is still very much in evidence in schools - more so than is typically found in organizations in our society. Physical force ranging from corporal punishment to physical ejection (administered by professional staff, school security forces, and police), deprivation of privileges (suspension, expulsion, detention, isolation), reprimands and public humiliation are still commonly-used measures for securing compliance with the school's goals, rules, and procedures.

The increasingly aggressive resistance of teachers to the use of coercive power to control them has tended to limit its effectiveness on them as participants in public school organizations, while increasing the effectiveness of utilitarian power (i.e., money) to induce their cooperation. Nevertheless, educational administrators still wield impressive coercive power

over teachers in such forms as tenure decisions, supervisory harassment, manipulating assignments to desirable teacher schedules, and arbitrary transfer. Of course, much of the educational administrator's power is legitimized in the eyes of the teachers by virtue of his official position in the sharply pyramidal bureaucratized structure which typifies public school organization. This effectively increases the coercive power of the superordinate beyond the legal minimum which he has been granted.

Brickell[6] and Carlson[7] are among those who have pointed out the key role which educational administrators - especially superintendents of schools - have to facilitate or block the introduction of change in schools. The more the superintendent investigates, finds out what others are doing, and senses the need for change, the greater the likelihood that change will occur. Superintendents who are out of touch with current conditions, do not keep alert to emerging needs and ways of meeting them, and do not facilitate change have great power to keep change in the schools to a minimum. Many investigators, in exploring and documenting this phenomenon, have taken the power of the superintendent of schools in this regard virtually as a given.

Systems Theory and Concept of Change Strategy

In the post-World War II effort to develop a science of administration, many concepts were drawn from the behavioral sciences - as the behavioral sciences had previously drawn upon the physical and biological sciences for a number of crucial concepts. Of these, perhaps none has been more widely utilized in taxanomic/descriptive work and in theory building than concepts of social systems theory. In considering problems of change, systems theory has been helpful in attempts to sort out and understand the relationships

between the various ways of bringing about change that are encountered. The practitioner, required to utilize an eclectic approach to the administration of change processes in schools during a period of immaturity if not infancy in administrative science, found systems concepts helpful in building a coherent repertoire of skills and procedures useful in the administration of change in schools. For the scientist, the earlier reliance upon the case study approach to analyzing the processes of change - a technique that had been highly popular among anthropologists - yielded to taxanomic inquiry seeking the "natural" elements of change and change processes much as the Greeks had sought to classify the natural elements over two thousand years ago.

There has been a substantial outpouring of taxanomic attempts to identify and classify the various processes by which planned, deliberate change may be controlled and directed. Inevitably, in a science moving from an eclectic to a systems view of its domain, there has been an increasing interest in the systemic nature of change processes. We find, therefore, while there is still much homespun folk-lore in contemporary literature on change in education, the better scientific work shows promise of identifying the change strategies which are available and the various tactics which "go with" each of the strategies.

Flowing from concern for the systemic nature of organization, and expecially such notions as homeostasis and equilibrium, arose the notion of designing and implementing coherent strategic interventions to help assure not only the installation of change but also enhance the likelihood that a new equilibrium would increase the staying-power of the intervention.

Strategies and Tactics of Organizational Change

Of the many attempts to describe the range of strategic orientations to change strategy, four have been selected for brief mention here as somewhat representative of the range of approaches available to those who have a special interest in the administrative problem of controlling and directing deliberate change in the organization.

Havelock,[8] dealing with the adoption of innovations, suggests that most strategies may be grouped under three headings:

1. Problem-solving, which rests on the assumption that innovation is part of a problem-solving process in which the user is involved. Problem-solving strategies applied to organizations include (a) system self-renewal (in the sense proposed by Likert[9] and Lippitt[10], (b) action research, which Havelock describes in terms of field-centered research by university professors rather than the problem-solving research of practitioners to solve their own problems, (c) collaborative action inquiry, which calls for the practitioner-scientist collaboration which Lewin viewed as so important,[11] (d) human relations laboratory training, (e) consultation by external facilitators, and (f) schemes for sharing successful practices. Tactics appropriate to the problem-solving strategy are: T-groups, reflection in the Rogerian helping relationship sense, non-evaluative feedback to individuals, role playing, group process analysis and problem solving, survey data feedback to organizations.
3. Social-interaction is the change orientation which emphasizes the patterns and processes by which innovations spread through social systems. Social-interaction strategies include (1) natural diffusion, (2) utilizing existing communication networks, (3) building new networks. Tactics that "go with" these strategies include

(1) the "county agent" concept, (2) multi-media communication, (3) salesmen, (4) endorsements from prestigious people or institutions.

3. Research, development, and diffusion orientation to change is based on the view that the development of an orderly, rational, sequential, well-coordinated research, development, and diffusion arrangement to develop high performance products for mass distribution based upon careful research will speed-up and increase the efficiency of the change process. Strategies for carrying this out include (1) the development of high performance products, (2) building information systems, (3) legislated change, (4) systems analysis. Tactics under this rubric include experiment-demonstration activities, translation from research to application, and packaging of high performance products into "fool proof" units.

Katz and Kahn[12], emphasizing the social systemic characterists which define the organization, underscore the importance of distinguishing between change (a) in the context of an individual adopting an innovation and (b) changing the functioning of the social system we call an organization. With the latter connotation in mind, they identified seven methods or strategies of organizational change:

1. The input of cognitive knowledge not previously possessed by the organization.
2. Individual counselling and therapy to promote freer more self-actualized behavior on the part of the organization's participants.
3. Influence of the peer group, in the tradition of Lewin in his attempts to change the dietary habits of Americans in World War II[13] and his associates in such situations as Coch and French's work in The Harwood Manufacturing Company.[14]

4. Sensitivity training.
5. Group therapy within organizations, as pioneered by the Tavistock Institute in Great Britain[15].
6. Survey data feedback, as pioneered by Mann[16].
7. Systemic change (which others may call "structural change"), such as redistributing decision making power and authority in the organization.

One of the more popular attempts to identify the major orientations from which strategies and tactics of organizational change are derived is that of Robert Chin[17]. He views change strategies and their tactics as being derived from three major orientations:

A. Empirical-rational strategies, which emphasize man's rationality and his inclination to pursue his own self-interest. This orientation emphasizes the communication of cognitive knowledge and its rational application to the solving of problems. Five strategies under the empirical-rational rubric are: (1) basic research and dissemination through general education, (2) personnel selection and replacement, (3) systems analysis, (4) applied research, (5) utopian thinking and planning for the future.

B. Normative-re-educative strategies of change are based upon quite a different perception of man in his environment than is the empirical-rational approach: its roots are, of course, in psychology and spring easily from the humanistic school - as typified by the Abraham Maslow-Carl Rogers orientation. It's stress is, of course, upon improving the functioning of the human social system and places primary importance upon the normative values and culture of the system as important determinants of that functioning. Strategies include (1) improving the problem-solving capabilities of the system and (2) facilitating the personal growth and

development of individuals within the system. The currently-popular "people" approaches to organizational change come under this strategic orientation. These include laboratory training for personal growth and group development and, of course, the broader concept of organization development which is emerging so rapidly[18].

C. Power-coercive approaches to change comprise the third strategic orientation which Chin identified. This rubric includes (1) the exercise of potitical power (often interpreted as "working within the system"), (2) rearranging the power structure (which can, of course, be done from within or by the exercise of power outside of the system), and (3) nonviolent power strategies such as demonstrations and other activities which utilize moral sanctions as a source of power.

Garth N. Jones has made one of the few systemic attempts to synthesize organizational change strategies and tactics from a general theory of organization[19]. Utilizing Etzioni's taxonomy of comparative organizational power systems[20], Jones developed a classification of change strategies and tactics which complement the particular type of organization in question.

Etzioni posited that organizations can be classified according to the kinds of power which they tend to use in order to influence the behavior of lower participants:

1. Coercive power, for example, rests upon the ability and willingness of the organization to manipulate the resources required by individuals to meet their fundamental needs.
2. Remunerative power is based upon the manipulation of desired material rewards, and
3. Normative power is based upon the ability and willingness of the organization to manipulate wanted symbolic rewards, such as esteem and prestige.

Involvement is a related dimension of individual organizational behavior which is best understood as a continuum.

1. Alienative involvement is essentially negative. We think of prisoners, draftees, and a good many high school students.
2. Remunerative involvement - lying closer to the center of the continuum - is essentially a business relationship such as between merchant and customer, employer and employee.
3. Moral involvement, an intensely positive orientation, characterizes the dedicated party member, the devoted church member, and the dyed-in-the-wool revolutionary.

The kind of power applied by the organization to the lower participants and the kind of involvement demonstrated by the participants describe what Etzioni calls a compliance relationship between the organization and its participants. As shown in Figure 1, there are nine possible "ideal" types of compliance relationships in organizations:

Kinds of Power	Kinds of Involvement		
	Alienative	Calculative	Moral
Coercive	1	2	3
Remunerative	4	5	6
Normative	7	8	9

Figure 1. Compliance relationships of organizations. From Amitai Etzioni, A Cognitive Analysis of Complex Organizations (New York: The Free Press, 1961).

In the "real world" three "ideal" types of compliance-styles would be most commonly encountered:

1. Coercive-alienative, in which the organization uses predominantly coercive power and the lower participants are highly alienated;
2. Remunerative-calculative, which is a type of organization which encourages participation by offering material rewards and participants become involved in order to receive the rewards;
3. Normative-moral, in which participants are involved because of their devotion to the cause and the organization seeks to control their behavior by manipulating the symbolic and social rewards of the system.

These are shown in the diagonal band in Figure 1, and their compliance styles are congruent (i.e., the power used complements the involvement style of the participants). The six types of organizations with the non-congruent compliance styles (see Figure 2) tend to encounter the greatest difficulties dealing with conflict, strain, and organizational change. This has particular importance to school organizations, which tend to evidence a primary normative power orientation with an obvious secondary coercive pattern and are characterized by a wise range of motivations for involvement. Figure 2 indicates the compliance patterns frequently encountered in various types of organizations.

Primary Compliance Patterns	Secondary Compliance Pattern
Predominantly Coercive	
Concentration camps	
Most prisons	
Most "correctional institutions"	
Custodial mental hospitals	
Coercive unions	
Predominantly Utilitarian	
Blue collar businesses and industries	normative
White collar businesses and industries	normative
Business unions	normative
Farmer's organizations	normative
Peacetime military	coercive
Predominantly Normative	
Religious organizations	
Ideological political organizations	
General hospitals	utilitarian
Colleges and universities	utilitarian
Fraternal associations	(these are high in social compliance
Action associations	and secondary in normative compliance)
Schools	coercive
Therapeutic mental hospitals	coercive

Figure 2. Classification of compliance structures of typical organizations listed in descending order of the weight given to the predominant pattern. Adopted from Amitai Etzioni, A Comparative Analysis of Complex Organizations, (New York: The Free Press, 1961), pp. 66-67.

Based on this comparative analysis of the compliance structure of organizations, Jones developed a typology of strategies of change appropriate to each type:

1. Coercive-like strategy, which would utilize pressure, stress induction, hierarchical power, and elite involvement typical as tactics.
2. Normative-like strategy, utilizing such tactics as participation, cooptation, education and training, voluntary association, and displacement of values.
3. Utilitarian-like strategy, relying on such tactics as goal-setting, placement, condition assistance, and empiricism.

4. Neutral tactics, which can be used to cut across the various types of organizations, such as: action research, communication, training/counselling, and technical modification.

The various strategies and tactics under the Jones formulation are summarized in Figure 3 (see next page).

The Dimensions of Organizational Change

Much of the literature on organizational change seeks to focus on how to change; there is clear need, however, to specify what to change. Leavitt[21] has provided an analysis of variable organizational dimensions which is helpful to both student and practitioner in this regard. Structure, in an organization - or any social system - does not refer to walls or membranes which separate functional units but rather refers to the on-going patterns of communication and interaction which persist over time and characterize the social system: such as its systems of authority, its communication networks, its work flow. Structure is one of four interacting organizational variables which are especially important in Leavitt's view of organizational change.

A second variable is task: the organization's reason for being. While an organization may have an overall task to accomplish, a complex organization will also have a number of other tasks - different from the main task but operationally important subtasks.

People in the organization's social system represent a third variable organizational dimension, including nor merely their skills, of course, but also the whole affective and social fabric which they contribute to the organization.

Finally, technology is a fourth variable dimension of the organization. While this may include machines, it also includes machine-related inventions such as scheduling, work-measurement, or other problem-solving devices.

Coercive-like	Normative-like	Utilitarian-like	Neutral
A. Pressure	A. Participation	A. Placement	A. Action Research
B. Stress induction	B. Involvement-commitment	B. Empiricism	B. Technical modification
C. Hierarchy	C. Cybernetics	C. Condition assistance	C. Communication
D. Elite involvement	D. Displacement of values	D. Goal setting	D. Training-counselling
	E. External relations		E. Timing
	F. Exposition and propagation		F. Marginality
	G. Educational training		G. Manipulation of charisma
	H. Voluntary association		H. Re-institutionalization
	I. Social awareness		
	J. Legitimization		
	K. Role definition		
	L. Emulation		

Figure 3 - Organizational Change Strategies and Their Related Tactics. After Garth N. Jones, Planned Organizational Change: A Study in Change Dynamics (New York: Frederick A. Praeger, Publishers, 1969).

These four organizational variables - task, structure, people, and technology - are highly interactive and interdependent (Figure 4).

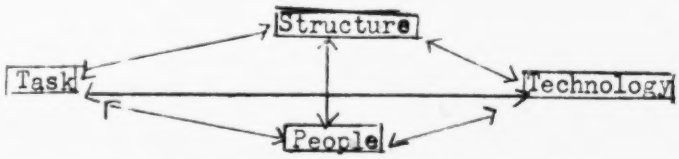

Figure 4. Interacting variables in organizational change. From Harold J. Leavitt, "Applied Organizational Change in Industry: Structural, Technological, and Human Approaches" in James G. March (ed.), Handbook of Organizations (Chicago: Rand McNally & Company, 1965).

Change in one perforce brings about compensatory or retaliatory change in the others. Using this insight, the concept of organizational change strategy becomes much less of an "either-or" proposition; the interrelatedness of the organizational dimensions, their dynamic interaction, requires the student or manager of change to recognize that the change strategy which he favors gives him primarily three things:

(1) a point of entry for intervention,

(2) a relative weighting or emphasis to the intervention activities selected, and

(3) an underlying value orientation.

The crucial concept which Leavitt provides is that there is no one right way to change organizations: there is a set of given manipulable variables - highly interactive, highly interdependent - which permit us to choose our entre. But the very interdependence of these variables means that - having chosen one as our main target - the others must also be dealt with.

Structural approaches to organizational change, long the major change mechanism of classical organizational theory, includes such things as defining jobs, clarifying roles, setting up clearly defined relationships between people, and pin-pointing responsibility. Decentralization is a structural

approach; changing the work conditions is also a structural approach, as is the opening-up of communication networks. While the overall goal of structural change - as it is for all organizational change - is improved task achievement of the organization, an immediate aim of structural change is to induce modifications in organizational behavior through structural rearrangements.

Technological changes are easily identified with Taylorism and Scientific Management; but they include such latter-day efforts as operations research, linear programming, PERT, and the heuristic problem-solving techniques of systems analysis. These tend to be highly rationally-oriented approaches to organizational change and seek not to make technological change an end in itself, but to induce more effective organizational behavior on the part of participants and influence structural changes to make the dynamics of the whole organizational system more effective.

People approaches to organizational change seek to induce organizational change by first changing the behavior of the organizations members. The literature on organizational change in the last twenty years has been increasingly dominated by people approaches, and the emphasis seems to be growing rapidly. A characteristic of the people-orientation to organizational change is its preoccupation with group functioning and change processes within the human social system of the organization, whereas technological and structural approaches have generally tended to concern themselves chiefly with problem-solving processes on the organization's macro level - largely ignoring the internal processes by which the new means are created and established within the organization. In an important sense, people approaches to organizational change are models of power-equalization in which

goal-setting and other decision making become a process shared by a wide spectrum of the organization's participants.

One of the contributions of systems theory to understanding of organizational phenomena is that it helps us to avoid single cause-and-effect kind of thinking and enables us to utilize multiple-causative concepts which are more appropriate to the complex and dynamic situation that one finds in organizations. Leavitt's conceptualization is helpful in this way in dealing with organizational change. Whereas many practitioners and researchers have been seeking the most effective strategy and tactics for bringing about organizational change, it appears highly likely that a more promising approach would be to utilize a repertoire of strategies and tactics - not in the highly eclectic sense of the past - but geared to the dynamic interrelationships of the organizational dimensions involved in the change effort. Realistically, then - for example - organizational change may be initiated as some sort of "people" strategy (e.g., normative-re-educative) but the effort will be incomplete unless adequate provision is made to meet the need for consequent changes in the task, technological, and structural dimensions which the dynamic relationship of the key organizational variables calls for.

PROBLEMS AND ISSUES IN ORGANIZATIONAL CHANGE STRATEGIES

As the concept of utilizing strategies and tactics of organizational change rapidly gains popularity among those who are interested in planning and controlling deliberate change in organizations, there is no want of problems and issues of importance to both the administrative practitioner and the researcher. However, five have particular importance to those who intend to apply the concept of change strategy to school organizations.

1. Collaboration of practitioner and scientist.

Though Kurt Lewin described the concept of improving organizational practice through the collaborative efforts of scientist and practitioner engaged in action research more than twenty-five years ago, and though he and many of his associates frequently demonstrated the effectiveness of this approach through their own work, much needs to be done to develop and utilize this relationship in schools. Organizational constraints, both at the university and in the school districts, have tended to block the development of the needed collaborative relationship. However, much needs to be done to clarify and define the role and function of the professor on the one hand the practitioner on the other hand in the development of the necessary collaborative relationship. It will be marked, of course, not only by differentiated skills and functions, but also by the feelings of respect and trust that such a collaboration requires. Fortunately, a few good models are becoming visible -- such as that described by Schmuck and his

colleagues [22] - which may facilitate the spread of effective collaborative efforts joining scientists and administrators in confronting problems of organizational change.

2. Individual v. organizational change. While a keystone in the development of organizational theory has been systems concepts, there is still much confusion in applying change concepts to organizations centering around the tendency to apply processes of individual changing to organizational change problems. Unlike the farmer or the physician, the school teacher and the school principal are not individual entrepreneurs. While there undoubtedly are important concepts emerging from the change behavior of individuals to be applied to organizations, the change problem confronting schools is basically organizational and requires systemic approaches.

3. Design of the change strategy. All too often, attempts at organizational change are not fully designed, but are atheoretical technical applications. This is as true of efforts to apply people technologies as it is other technical interventions. For example, many schools have been subjected to such limited interventions as a series of sensitivity training sessions or some group process training, with little or no thought as to the overall design of the strategy. It is easy to get the impression that some would-be change agents are so enamored with the power and beauty of their technology - as exercised in T-groups or encounter groups - that they have little thought for the need

for a systemic approach to the organization's problems. Leavitt's concept of interactive organizational dimensions can be helpful here.

4. Innovation and organizational change. The literature on organizational change evidences considerable confusion as to the meanings of the terms "innovation" and "change"; indeed the terms are often used synonymously and interchangeably. While some writers contend that innovation occurs whenever we try anything new - such as smoking a cigarette for the first time - there appears to be a coalescing of opinion in support of a narrower definition. That is that innovation is characterized by (a) a certain newness or novelty and (b) the quality of being easily described in specific terms and its boundaries or limits readily defined. Thus, specific instructional "packages" such as the Physical Sciences Study Committee (PSSC) curriculum on the Individually Guided Education (IGE) program might be described as innovative as might laboratory training in human relations or - at one time, at least - performance contracting. Organizational change seems increasingly to connote something other than the mere adoption of some change in the work processes of the organization no matter how innovative. The aim of organizational change seems to be in the direction of fundamentally changing the way in which an organization makes its decisions in the process of coping with its environment. Concepts of organizational health and organizational effectiveness are helpful in understanding the thrust of the concept. The selection and use of organizational change strategies can hardly be undertaken until there is some

clarification and agreement as to what orientation the participants have to the concepts of innovation and organizational change.

5. Social system - sociotechnical system views. The rapid increase in the popularity of "people change" technology in meeting the need for organizational change in schools is, of course, thrusting systemic concepts of the organization to the forefront of administrative thought. In the attempt to emphasize the human aspects of organizational change processes - appropriately, I think - there is a tendency to overlook or downgrade the importance of the technical aspects of the situation. As are coal mines, factories, and mills, schools are shaped in large measure by the tools of their trade and organizational behavior considerably influenced by the work processes and work flow inherent in public school education as it presently exists. It is probable that - for the purposes of designing and implementing strategies of organizational change - the concept of the school as a sociotechnical system as pioneered by the British Tavestock group and explicated by Lippitt would be helpful in solving some of the either - or dilemmas posed by the apparent dichotomy between the human aspects of the organization and its technological aspects.

NOTES

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[5] Ronald G. Havelock, Planning for Innovation Through Dissemination and Utilization of Knowledge (Ann Arbor, Mich.: Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, The University of Michigan, 1971).

[6] Brickell, op. cit., p. 22.

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[23] Lippitt, op. cit.